Carmel Urban Forestry

The City of Carmel

The City of Carmel:

12 years as Tree City USA

10 years as Tree City USA
(Growth Award)

The State of Indiana:

56 Tree Cities

15 Growth Award Cities

4 Tree Line Cities

568 total incorporated cities and towns

Carmel is part of the 10% of Indiana cities and towns involved in the Tree City USA.

In 2004, 523 Tree Cities nationally earned the Growth Award by completing activities to strengthen their local tree care programs.

The Urban Forestry Committee

The Urban Forestry Committee is a board composed of seven members who are appointed by the mayor. The Committee's responsibilities are to assist the City in the development and administration of a comprehensive community tree management program.

Our Vision:

The City of Carmel Urban Forestry Committee envisions a future of the Urban Forest as a healthy, diverse, colorful, display of canopy trees lining the streets and throughout the City, which provides an environment which sustains wildlife and is accessible to every resident.

Our Mission:

The purpose of the Urban Forestry Committee is to assist, advise, and develop urban forestry programs for the City of Carmel; while also helping direct a well funded, cost-effective program and to attract different sources of funding. Through their efforts, they will continually update and modify the urban forestry program as well as participate in activities that emphasize education and maintenance of the urban forest.

URBAN FORESTRY COMMITTEE MEETING DATES

Meetings start at 5:15 p.m. at City Hall on the 3rd floor in the Department of Community Services Conference Room, normally on the 4th Wednesday of each month.

Recommended Street Tree Species for Carmel, Indiana

This list is provided as a guide to the most appropriate species for street tree plantings in urban areas. There is no single perfect tree; the most successful course is to match the planting site limitations with the right tree for that location. Each site must be evaluated and possible restrictions of tree species noted. These restrictions include rooting space, soil texture, soil pH, drainage, exposure, overhead wires and surrounding building surfaces.

The trees appearing on this list have different requirements and tolerances. All of these species **should** do well in the urban forest environment of Carmel. Before selecting any particular species or variety, further research should be done to ensure that the site would satisfy the specific requirements of the plant. Some of the species or cultivars listed here may not be readily available at local nurseries, particularly in calipers large enough for planting in high traffic areas. Tree shelters and staking may provide limited protection.

This list can be view at:

www.ci.carmel.in.us/services/DOCS/DOCSUF.htm

Constructed Soils and How They are Used

Structural Soil is designed to support the weight of walks, roads, pedestrians and vehicles as well as provide a well-aerated soil substrate for tree root growth. Weight is transferred from aggregate to aggregate, then to the soil under the aggregate. Little weight is borne by the soil between aggregates. This allows roots to grow well in the soil between the aggregates. In normal design, the soil and sub-base under a walk or pavement is compacted to 95% proctor density. This reduces air exchange below the critical level needed for root growth. As a result, roots are unable to grow into this compacted soil.

How to Mulch

Mulch should be layered two to four inches deep. Try to mulch as much of the area under the drip line of the tree as possible. Do not cover the actual trunk of the tree with mulch. Leave a two inch space to avoid excessively moist bark conditions that can cause trunk decay.

WRONG

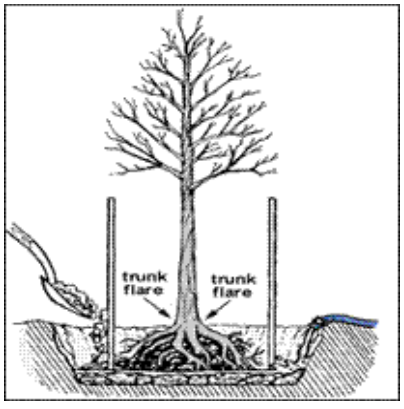
Piling mulch up around the trunk keeps the trunk moist, which allows for insects and disease to enter the bark.

RIGHT

When a tree has been mulched properly, the mulch is no deeper than 3 to 4 inches, and it is pulled back from the trunk of the tree.

Preparing the Planting Site

Contact Holey Moley (within Indiana-1-800-382-5544) to locate any underground utilities before you dig.
If possible, prepare the site before you bring in the tree.
Keep the root ball well watered and keep the tree in a shaded place until you are ready to plant.
It is imperative to determine the trunk flare on each balled and burlaped tree before the planting site is dug so that the depth of the planting site can be properly measured.
The trunk flare is the point where roots begin to branch from the trunk. (*The top of the root ball is not always the trunk flare*.)
Measure the height from the base of the trunk flare to the
Dig to the depth of the trunk flare.
Dig the space at least 2 times the diameter of root ball.
Break up compacted soil. Sides of the planting space should not be packed. Leave the bottom of the space firm.
Remove the bottom of basket with wire cutters.
Lift the tree into planting space by the root ball, not the
Remove the burlap from the immediate trunk area of the
Pull back the excess soil around the trunk of tree to locate
The trunk flare and top of root ball should be at or slightly above grade.
Do not amend the soil unless planting in building rubble or severely disturbed soil.



How to Plant a Tree

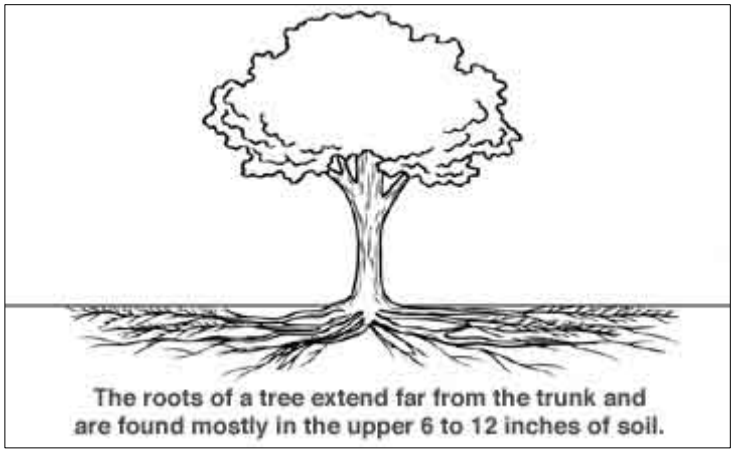
Lift tree into planting space by the root ball, not the trunk.
Balance the tree upright in center of planting space.
Cut away strings, burlap and plastic, exposing the root ball.
For trees in wire baskets, remove the rest of the wire basket by vertically wire cutting the basket and peeling the basket off.
If the tree is container grown, cut and remove the container.
Prune dead or crushed roots and straighten or cut circling roots. Make clean cuts.
Never plant too deep. The trunk flare and top of root ball should be at grade. *(Trunk flare may be hidden within the root ball.)* Fill soil up to the tree base to where roots begin to branch from the trunk.
Begin refilling with soil up to where the trunk flare begins to branch, watering as you fill to firmly set tree. Gently tamp.
Prune only dead or injured branches. Do not paint wounds.
Remove tree wrap, tape and string from the trunk. Trunks should be wrapped only to protect them in transit to planting site.
Pour five to ten gallons of water slowly around the tree so that it all soaks in.
Stake and brace the tree, if necessary. Support the tree but allow it to move or sway.
Mulch evenly with 3-4" of composted material at least to the diameter of crown of tree. Leave 1-2" circle of bare soil around the trunk. Deep layers of mulch can be harmful.
Do not fertilize the tree for at least one year.

TREE MYTH #1
Tree Roots Break Sewer Lines

Roots often get blamed for sewer problems. There is no doubt that when the plumber's snake does its work, handfuls of roots are often retrieved before the sewer starts flowing properly. But where did these roots come from? Why were they in the sewer? Did the tree really cause the sewer problem?

- Roots grow best through soil when following favorable conditions of moisture, texture and oxygen. Typically, this is the top 18 inches of soil, well away from sewer lines.
- Nothing happens until the sewer pipe breaks or its joints leak, oozing nutrients and water into the surrounding soil. Nearby roots begin to thrive and grow rapidly. They can then enter the defective pipe and eventually block the flow of its sewage.
- Sewer lines are usually made of clay tiles that are glued together. Clay is fragile and eventually cracks due to soil settlement or earth tremors. When this happens, tree roots may enter the line.
- Tree roots are rarely associated with water line problems. Water lines are commonly made of cast iron. They are screwed together and designed not to break or leak.

Tree roots do not break sewer lines. They are just a symptom of a problem that already exits.



The roots of a tree extend far from the trunk and are found mostly in the upper 6 to 12 inches of soil.

TREE MYTH #2
Tree Roots Cause Sidewalk Damage

Tree roots are not the only cause for sidewalk damage. Roots may sometimes help lift or crack sidewalks, but in many cases the culprits are soil conditions or poor construction.

- When using soil maps to compare sidewalk damage, it is easy to see that in areas where soils are of a high swell and shrink nature, damage is greater than where the soil is strong and stable.
- Because of the differences in soils, the same construction design should not be used throughout the City, even though this is a common practice. As a result, roots are often blamed because they follow the gaps created as pavement heaves and settles.
- Sidewalks typically have a lifespan of 25 to 30 years before it needs to be replaced. If a tree is planted between the sidewalk and the curb, by the time it is of a size to possibly lift or crack the sidewalk, it is already time to replace the sidewalk.

Benefits of Trees

Trees impart a distinctive character and identity to the City and to its various neighborhoods. Carmel is noted for its environmental amenity, which trees help create. To come home to a green and shaded community establishes a powerful sense of place.

Trees establish visual harmony and continuity along the City's streets. The experience of driving, which is such a large part of the experience of Carmel residents, is more pleasurable along tree-lined streets. If a single tree is a thing of beauty, a well-designed street of trees can be a striking experience. Distinctive plantings on major streets also help orient drivers, making the City more "imageable" and therefore easier to navigate.

Trees enrich the aesthetic experience of the City. Trees add pleasing shapes, colors, fragrance, texture, scale and seasonal change. The beauty which trees add to any landscape is appreciated in urban settings, where the most people live and work and where environmental amenity is often hardest to find.

Trees help diffuse noise. Dense foliage helps break up the sound waves from traffic and other noises, and renders them less intrusive by visually screening their source.

Trees increase and stabilize property values. Realtors report that trees increase residential property values from 4 to 15 percent. Surveys in Indiana identify mature trees as the most desired amenity in home sales. Commercial districts are also strengthened by the enhanced image trees provide. The economic return to the City in the form of property, sales, and transfer taxes is substantial.

Authorization Form For Planting in the Right of Way

An Authorization Form and Tree Planting Specifications (on the City of Carmel website for duplication for homeowners) is used to validate tree planting and landscape plans in the City right of way. Also available for the homeowner is a Recommended Street Tree List, information of how to plant a tree properly and how to mulch a tree properly. The Tree Planting Specifications and the Recommended Tree List should simplify any questions a homeowner has when deciding on what to plant and where to plant a street tree.

According to the Carmel City Code Section 6-64 (a), "…no person shall plant trees between the street and the sidewalk and/or property line unless they are in compliance with regulations, rules and specifications…"

Facts on Japanese Beetle

First reported in North America in 1916, the Japanese beetle now occurs in over 20 states including Indiana. Japanese beetle adults are slightly less than 1/2 inch long, and are shiny, metallic green. They have coppery-brown wing covers that do not entirely cover the abdomen. Adult Japanese beetles infest over 300 different plants, including; shade and fruit trees, ornamental shrubs, small fruits, garden crops, weeds, and field crops are often damaged. The grubs are serious pest of lawns, other grasses, and nursery stock.

Removing beetles by hand or trapping may provide adequate protection for small plantings when beetle numbers are low. However, the presence of beetles on or in the proximity of a plant will attract more beetles. Consequently, Japanese beetle traps often attracts more beetles and results in subsequent damage to plants.

Facts on Bagworms

Bagworms are caterpillars that live inside spindle-shaped bags which they construct to protect themselves against birds and other enemies. These bags are composed of silken threads and small pieces of foliage. In midsummer, bagworms may defoliate arborvitae, junipers and other trees and shrubs. Bagworms mature in late August or early September. At this time the bags are about 2 inches long. The worms then attach the bags firmly to branches or other objects and change into the adult stage. The wingless female never leaves the bag and is fertilized by the winged male. The eggs are laid in the bag where they pass the winter. There is only one generation each year.

CONTROL MEASURES: Bagworms tend to be a problem on trees that are isolated or in urban settings. When bags are found in the tree, simply pick the bagworms off and drown them in a bucket of soapy water. This method is

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Urban Forestry Program
One Civic Square
Carmel, IN 46032

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Facts on Emerald Ash Borer

The Emerald Ash Borer (EAB) is an exotic beetle that was discovered in southeastern Michigan near Detroit in the summer of 2002. The adult beetles nibble on ash foliage, but cause little damage. The larvae (the immature stage) feed on the inner bark of ash trees, disrupting the tree's ability to transport water and nutrients. This activity is what causes the immense damage and later death of ash trees. Emerald ash borer probably arrived in the United States on solid wood packing material carried in cargo ships or airplanes originating in its native Asia. The Emerald ash borer was established in Ohio (2003) and Carmel, Indiana in 2006. Since its discovery, EAB has:

- Killed at least 15 million ash trees in Michigan, Ohio and Indiana.
- Caused regulatory agencies to enforce quarantines (Ohio, Indiana, and Michigan) and fines to prevent potentially infested ash trees, logs or firewood from moving out of areas where EAB occurs. [http://www.emeraldashborer.info/]

Good Reasons not to "TOP" a Tree

1. Weak Limbs:

At best, the wood of a new limb that sprouts after a larger limb is truncated is more weakly attached than a limb that develops more normally. If rot exists or develops at the severed end of the limb, the weight of the sprout makes a bad situation even worse.

2. Insects and Disease:

The large stubs of a topped tree have a difficult time forming callus. The terminal location of these cuts, as well as their large diameter, prevents the tree's chemically based natural defense system from doing its job. The stubs are highly vulnerable to insect invasion and the spores of decay fungi. If decay is already present in the limb, opening of the limb will speed the spread of the disease.

3. Rapid New Growth:

The goal of topping is usually to control the height and spread of a tree. Realistically, topping has the opposite effect. The resulting sprouts are far more numerous than normal new growth. They elongate so rapidly that the tree returns to its original height in a very short time and with a far more dense and dangerous crown.

4. Cost:

To a worker with a saw, topping is much easier than applying the skill and judgment needed for good pruning. Though, topping may cost less in the short run, the true costs of topping are hidden. These include: reduced property value, the expense of removal and replacement if the tree dies, the risk of liability from weakened branches, and increased future maintenance.

How to Prune a Tree

The first limbs to remove are the dead, dying and diseased limbs of the tree. Corrective pruning also removes damaged wood and eliminates rubbing branches. Young tree pruning is often preventive, eliminating potential problems before they occur. Select permanent scaffold branches with wide angles of attachment to the trunk. Remember to trim the tree so that at least 2/3 of the tree height is crown.

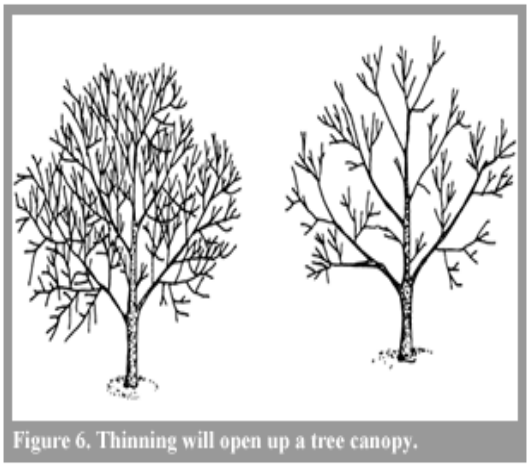
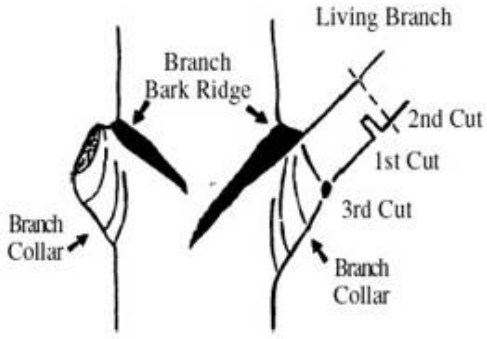


Figure 6. Thinning will open up a tree canopy.

Whenever you are removing limbs greater than one inch in diameter, use the three-cut method to avoid tearing bark. First, about 12 inches from the trunk, cut halfway through the limb from the underside. Second, about one inch past the first cut, cut through the limb from the top side. The limb's weight will cause it to break between the two cuts. Make the third cut outside the branch collar, as described earlier. Use a handsaw to provide greater control.



Branch bark ridge and branch collar

Lawn Mower Damage

The damage depicted in this scene can easily be prevented by keeping lawnmowers and string trimmers away from tree trunks. A tree is damaged each time it is struck by lawn maintenance equipment. The damage that can be caused by lawn maintenance equipment is irreversible.

Prevention begins when lawn maintenance equipment operators are made aware of the potential damage they can cause when they operate their equipment irresponsibly around trees. Preventing lawnmower damage through education is easier and more cost effective than removing and replacing damaged trees.

"The best friend on earth of man is the tree. When we use the tree respectfully and economically, we have one of the greatest resources of the earth."

- Frank Lloyd Wright

Facts on Poison Ivy

How do you get Poison Ivy?

You get it from touching it or touching something that has touched it, like your clothes or your dog. You normally get it from touching the leaves, but pulling the vine out by the roots - even in winter - will give you a rash. Using a weedeater to remove poison ivy will result in spraying your legs with poison ivy. What gives you the rash is the sap from the ivy which is called urushiol; it causes an allergic reaction after the first sensitizing exposure. The oil is in the leaves, vines, and roots.

What about Immunity?

Some people appear to be immune, others become immune. HOWEVER, you can gain or lose immunity, so to assume you cannot get it if you never have before is foolish. People change as they age. Never assume that you are immune at anytime, no matter what your experience is with poison ivy.